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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,401	02/08/2006	Brian J Daniels	H0006041-US	2482
128 7590 05/12/2009 HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245				
EXAMINER				
IP, SIKYIN				
ART UNIT		PAPER NUMBER		
1793				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/549,401

## Applicant(s)

DANIELS ET AL.

## Examiner

Sikyin Ip

## Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Terminal Disclaimer***

The terminal disclaimers filed on January 29, 2009 have been reviewed and are accepted. The terminal disclaimers have been recorded.

### ***Claim Objections***

Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 8 depends on canceled claim 7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 8-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10287939 (PTO-1449), JP 03072043, JP 04165037, or JP01096374 (PTO-1449).

Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002069550.

JP 10287939, JP 03072043, JP 04165037, JP01096374, or JP2002069550 in their respective abstract discloses the features including the claimed target Cu alloy/thin film. Therefore, when prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art would clearly be motivated to make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Harris, 409 F.3d at 1341, In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). As stated in In re Peterson, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that "A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art".

Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range (Ex parte Fu, 2008 WL 867826 (BPAI 2008) disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

The “target”, “thin film”, or “interconnect” in instant claims fail to recite structures; thus, it reads on the products of cited references. Kropa v. Robie, 88 USPQ 478 (CCPA 1951) and Corning Glass Works v. Sumitomo Electric U.S.A. Inc., (CA FC), 9 USPQ2d 1962.

### ***Response to Arguments***

Applicant's arguments filed January 29, 2009 have been fully considered but they are not persuasive.

Examiner has not provided any specific statement, for example, as to why one of ordinary skill in the art would read any of these references – with their specific and confined list of additional elements – and consider that other elements outside of those confined lists would be appropriate.

Applicants argue that “ But, first, there is no factual evidence showing that the claimed elements are critical and possess unexpected results. Second, the Board said that “the tenth edition of the Merck Index lists ten thousand compounds. In our view, each and every one of those compounds is described’ as that term is used in 35 U.S.C. § 102 (a), in that publication”. One of ordinary skill artisan would have been led to select the claimed elements, motivated by a reasonable expectation of successfully achieving cited references’ objectives. The disclosed genus would have rendered the species prima facie obvious.

In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990); Merck & Co., Inc. v. Biocraft Laboratories, Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir 1989); and In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Third, as is evinced by JP 10287939 functions of many claimed elements are known ([0007] – [0012]).

Applicants argue that

but none of the references teach, disclose or suggest a copper target comprising tin as a first added element, along with a second added element from the group consisting of Al, As, Au, B, Be, Ca, Cd, Co, Cr, Fe, Ga, Ge, Hf, Hg, Ir, Li, Mg, Mn, Nb, Ni, Pb, Pd, Pt, Sb, Sc, Si, Ta, Te, V, W, and Zn; or a third added element selected from the group consisting of Al, As, Au, B, Be, Ca, Cd, Co, Cr, Fe, Ga, Ge, Hf, Hg, In, Ir, Li, Mg, Mn, Nb, Ni, Pb, Pd, „ Pt, Sb, Sc, Si, Ta, Te, V, W, and Zn. „

But, for example, JP 10287939 discloses below:

Alternatively, the above Cu alloy may also contain 0.01-1.0 wt.% Sn, Mg, Ni, Ag, Zn, Si, and/or Mn in total.

## Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 57056215, JP 01096376, and JP 01096374 are references submitted applicants, which in their abstracts have shown that the claimed Cu target alloys elements and their proportions are known for target materials.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

#### Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Sikyin Ip/  
Primary Examiner, Art Unit 1793

May 10, 2009